

NWS FORM E-19 (COVER)

U.S. DEPARTMENT OF COMMERCE
NATIONAL OCEANIC AND ATMOSPHERIC ADMINISTRATION
NATIONAL WEATHER SERVICE

REPORT ON RIVER GAGE STATION

REVISED, PRINTED DATES: 04/08/2010, 08/22/2010

LOCATION: ALDA
STREAM: WOOD RIVER
BASIN: PLATTE 9

HSA: GID

REFERENCES:

DEPARTMENT OF NATURAL RESOURCES STATION DESCRIPTION - OCTOBER 2002
FLOOD PLAIN INFORMATION-GRAND ISLAND COE DISTRICT - AUGUST 1964
GRAND ISLAND INDEPENDANT - NEWSPAPER
USGS FORM 9-197 MAY 1978
WATER RESOURCE DATA NE - USGS
WOOD RIVER SUNBEAM - NEWSPAPER
WS FORM E-19 DECEMBER 1981

ABBREVIATIONS:

BM - bench mark	EPA - Environmental Protection Agency
DS - downstream	IBWC - International Boundary and Water Comm.
US - upstream	MSRC - Mississippi River Commission
HW - high water	MORC - Missouri River Commission
LW - low water	NOAA - National Oceanic and Atmospheric Admin.
RB - right bank	NOS - National Ocean Survey
LB - left bank	NWS - National Weather Service
MGL - mean gulf level	TVA - Tennessee Valley Authority
MLW - mean low water	USACE - U.S. Army Corps of Engineers
MSL - mean sea level	USBR - U.S. Bureau of Reclamation
MLT - mean low tide	USGS - U.S. Geological Survey
MT - mean tide	USWB - U.S. Weather Bureau
WQ - water quality	NGVD - National Geodetic Vertical Datum
RM - reference mark	NAD - North American Datum
RP - reference point	

LOCATION IDENTIFICATION: ALDN1
NWS INDEX NUMBER: 25-0091-5
USGS NUMBER: 06772000

MAP OF GAGE LOCATION

LATITUDE: 40 51 17 SOURCE: NDNR Station Descrip
LONGITUDE: 98 28 27

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NWS FORM E-19 PAGE 1: GAGE MAP

BENCHMARKS

ELEVATION OF GAGE ZERO: 1895.920 VERTICAL DATUM: NGVD 1929
LEVELING AGENCY AND DATE: 4/20/2009 CHECKBAR: 16.370
RATING AGENCY: USGS

BENCHMARK	DESCRIPTION	GAGE ZERO	DATUM
RM5	DEPT. OF ROADS BRASS CAP SET IN THE SOUTHEAST CONCRETE WINGWALL OF THE WOOD RIVER BRIDGE ON STATE LINK 40 C SOUTH OF ALDA.	15.160	1911.080
RM6	CHISELED SQUARE ON UPSTREAM CORNER OF LEFT CONCRETE BRIDGE WINGWALL.	15.260	1911.180
RM7	CHISELED X ON THE SOUTH UPSTREAM LEG OF THE GAGE HOUSE.	15.400	1911.320
RM8	STANDARD BRONZE TABLET IN A CONCRETE POST 31.5 FEET DOWNSTREAM FROM THE NORTHEAST CORNER OF THE GAGE HOUSE.	11.950	1907.870

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GAGES

DCP

TELEM

NESS ID: 4021353A
 OWNER: STATENE
 REPORT TIME: 00:56
 INTERVAL: 60

TYPE OF TELEMETRY: dedicated
 OWNER: State DWR
 PHONE NUMBER: 308-385-5445
 INTERVAL:
 PAYOR/COST OF LINE: Unk / \$

GAGE TYPE	OWNER	MAINTENANCE	BEGAN	ENDED	GAGE LOCATION/REMARKS
bubble	USGS	USGS	10/30/1953	06/24/1977	THIS IS AN INSIDE RECORDER DRIVEN BY A BUBBLER GAGE-ALL HOUSED IN A STANDARD LINCOLN DISTRICT 48 INCH CMP SHELTER, SOME 1.3 MILES SOUTHWEST OF ALDA.
staff	USGS	USGS	10/30/1953		THE OUTSIDE REFERENCE GAGES ARE THREE STAFF GAGES EACH CONSISTING OF A SINGLE STAFF SECTION MOUNTED ON A 2x6 INCH WOODEN SUPPORT DRIVEN INTO THE STREAM BED NEAR THE GAGEHOUSE. THESE GAGES RANGE FROM 3.26 FT. TO 13.53 FT.
bubble	USGS	USGS	06/24/1977	03/14/1995	THE USE OF STILLING WELL WAS DISCONTINUED AND A SERVO MANOMETER WITH A 35 FOOT RANGE WAS INSTALLED.
crest	USGS	USGS	05/17/1982		FISHER-PORTER DIGITAL RECORDER, STEVENS A-35 RECORDER AND SERVO-MANOMETER WITH 35 FT RANGE REMOVED 3/14/95.
bubble	State DNR	State DNR	03/14/1995		CREST STAGE RECORDER WAS INSTALLED IN RIGHT BANK 6 FEET DOWNSTREAM OF GAGE, CAPTURING LEVELS OF 6 TO 12 FEET. AN ISCO 4230 BUBBLE FLOW METER WITH RECORDER WAS INSTALLED 3/14/95.

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HISTORY

PUBLICATION/LOCATION OF RECORDS	STARTING DATE	ENDING DATE
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WRD NE	10/30/1953	

TYPE OF GAGE	OWNER	STARTING DATE	ENDING DATE
-----	-----	-----	-----
bubble	USGS	10/30/1953	06/24/1977
staff	USGS	10/30/1953	
bubble	USGS	06/24/1977	03/14/1995
crest	USGS	05/17/1982	
bubble	State DNR	03/14/1995	

ZERO ELEVATION	STARTING DATE
-----	-----
1897.660	01/01/1929
1897.660	10/30/1953
1895.920	04/17/2009

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CRESTS

FLOOD STAGE: 10.00 ACTION STAGE: 9.00 BANKFULL STAGE: 9.00
 FLOOD FLOW: 555 ACTION FLOW: 390

DATE OF CREST	TIME LST	CREST (ft)	FLOW (CFS)	FROM HIGH WATERMARKS	BASED ON OLD DATUM	CAUSED BY ICE JAM	REMARKS
07/25/1958	UNDEF	10.83	742				
03/29/1960	UNDEF	10.95	1370				
06/12/1960	UNDEF	10.74	1020				
05/29/1965	UNDEF	10.83	1150				
06/16/1967	UNDEF	12.22	1630				RECORD FLOOD.
06/26/1968	UNDEF	11.45	968				
03/21/1969	UNDEF	11.65	982				
03/15/1978	UNDEF	10.92	912				
02/27/1980	UNDEF	7.63	214	X			
07/08/1984	UNDEF	10.05	598	X			
09/17/1985	UNDEF	10.22	582	X			
09/09/1986	UNDEF	6.11	97				
06/13/1987	UNDEF	8.64	369				
02/21/1988	UNDEF	6.10	96				
06/28/1989	UNDEF	9.78	512				
08/15/1990	UNDEF	8.39	261				
06/01/1991	UNDEF	10.02	559				
07/13/1992	UNDEF	5.71	43				
03/12/1993	UNDEF	11.81	1300				
06/11/1994	UNDEF	10.32	576				
05/30/1995	UNDEF	9.94	486				
06/18/1996	UNDEF	10.10	443				
08/14/1997	UNDEF	5.65	47				
05/24/1998	UNDEF	10.25	575				
06/03/1999	UNDEF	8.92	286				
06/16/2000	UNDEF	5.97	50				
03/13/2001	UNDEF	8.22	235				
08/29/2002	UNDEF	5.67	41				
05/29/2003	UNDEF	6.78	106				
07/30/2004	UNDEF	5.19	19				
05/12/2005	08:53	12.30	1740				TIME IN GMT.
06/20/2006	UNDEF	6.95	116				
02/23/2007	UNDEF	10.09	364				Peak discharge and gage height for the year.
04/27/2007	15:00	9.35					

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LOW WATER RECORDS

DATE OF LOW WATER	STAGE (ft)	FLOW (CFS)	REMARKS
10/30/1953	0.00	0	ZERO FLOWS ARE COMMON IN LATE SUMMER AND FALL
09/15/1994		0	0 FLOW 9/15 TO 9/22 AND 10/25 TO 11/11 1994
09/27/1995		0	0 FLOW 9/27 THROUGH 10/24 1996
03/26/1996		0	0 FLOW 03/26/1996 AND 10/31/1996
09/07/1997		0	0 FLOW MANY DAYS IN 1997
10/01/1998		0	0 FLOW MANY DAYS IN 1998
10/08/1998		0	ACTUAL FLOW WAS 0.41 ON 10/8/98 AND 12/1/98
09/07/2000		0	0 FLOW 9/7 TO 9/30 2000
10/01/2001		0	0 FLOW MANY DAYS THROUGH THE YEAR
10/01/2003		0	0 FLOW MANY DAYS THROUGH THE WATER YEAR
10/13/2003	3.90	0	NDNR SAID POINT OF ZERO FLOW OCCURS AT 3.9 FT
10/01/2004		0	0 FLOW MANY DAYS THROUGH THE WATER YEAR
10/01/2005		0	Many days of 0 Oct-May

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CONDITIONS AFFECTING FLOW

MILES ABOVE MOUTH: 19.0 DRAINAGE AREA: 628.0 POOL STAGE: 0.0

STREAM BED: COMPOSED MAINLY OF SAND AND SANDY CLAY.

REACH: DOWNSTREAM TO THE OUTSKIRTS OF GRAND ISLAND, UPSTREAM TO
NEAR WOOD RIVER.

REGULATION: NUMEROUS SMALL PUMP DIVERSIONS FOR IRRIGATION ABOVE STATION

DIVERSION: WATER DIVERTED BY NUMEROUS SMALL PUMP IRRIGATION.

WINTER: CHANNEL SUBJECT TO FREEZING AND ICE JAMS.

TOPOGRAPHY: NATURAL CHANNEL IN THE VICINITY OF GAGE IS VERY WINDING WITH
FAIRLY HIGH BANKS. THE CHANNEL IS STRAIGHT FOR A DISTANCE
OF 100 FT. ABOVE THE GAGE, AND 60 FT. BELOW THE GAGE, WITH
A HIGH BANK ON RIGHT AND MEDIUM BANK ON THE LEFT.

REMARKS:

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DAMAGE

STAGE AREAS AFFECTED

10.00 MINOR LOWLAND FLOODING BEGINS IN RURAL PASTURE AND FARM LANDS. AT MODERATE AND EVEN HIGHER STAGES,
THE LEFT BANK OVERFLOWS FIRST FLOODING LOWLANDS AND SOME COUNTRY ROADS. AT VERY HIGH STAGES, STATE
HIGHWAY 30 UPSTREAM ACTS AS A STRONG CONSTRICTION TO FLOOD CRESTS.

12.22 RECORD FLOOD.

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RIVER STAGE DATA

	14-	

	13-	

12.22 - RECORD FLOOD.	12-	12.30 05/12/2005
	-----	11.81 03/12/1993
	-----	11.65 03/21/1969
	-----	11.45 06/26/1968

	11-	10.95 03/29/1960
	-----	10.74 06/12/1960

	10-	10.32 06/11/1994
10.00 - MINOR LOWLAND FLOODING BEGINS IN RURAL PASTURE AND FARM LANDS. AT MODERATE AND EVEN HIGHER STAGES, THE LEFT BANK OVERFLOWS FIRST FLOODING LOWLANDS AND SOME COUNTRY ROADS. AT VERY HIGH STAGES, STATE HIGHWAY 30 UPSTREAM ACTS AS A STRONG CONSTRICTION TO FLOOD CRESTS.	-----	10.10 06/18/1996
	-----	9.94 05/30/1995
	-----	9.78 06/28/1989

	9-	9.35 04/27/2007
	-----	8.92 06/03/1999
	-----	8.64 06/13/1987

	8-	8.39 08/15/1990

	-----	7.63 02/27/1980

	7-	
	-----	6.95 06/20/2006
	-----	6.78 05/29/2003

	6-	6.11 09/09/1986
	-----	5.97 06/16/2000
	-----	5.71 07/13/1992

	5-	5.19 07/30/2004

REACH: DOWNSTREAM TO THE OUTSKIRTS OF GRAND ISLAND, UPSTREAM TO NEAR WOOD RIVER.

ELEVATION ZERO: 1895.92

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CONTACTS

SQ	CONTACT/REMARKS	PHONE
1	ALAN WEINRICH	308-384-5712
1	GRAND ISLAND CIV DEFENSE	308-381-5360
3	NDNR ORD OFFICE MAINTENANCE.	308-728-3325

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